

PINNOTHERES JAMESI SYNONYMIZED WITH
P. RETICULATUS (DECAPODA: BRACHYURA)

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Abstract. — The pea crab *Pinnotheres jamesi* is synonymized with *P. reticulatus*. Drawings of entire specimens are provided for the first time. The known range is extended from the tip of Baja California to the Pacific coast of Costa Rica. A host is recorded.

Upon reviewing several vials of pinnotherid crabs from the Muséum National D'Histoire Naturelle, Paris, I discovered that *Pinnotheres jamesi* Rathbun, 1923 (male) is identical with *P. reticulatus* Rathbun, 1918 (female). Both were taken from the host bivalve *Polymesoda inflata* Keene, 1971.

Pinnotheres reticulatus was described from a female only, while *P. jamesi* was described from a male. There may be great sexual dimorphism in the genus *Pinnotheres* (Rathbun, 1918) which was taken into account in synonymizing these two species.

Simple line drawings of both male and female *P. reticulatus* are provided for the first time. These include dorsal, ventral, and frontal views, as well as chelae and third maxillipeds. Comparison of the third maxillipeds is based partly on illustrations of these structures in the original descriptions.

The known range of *P. reticulatus* is extended from San Josef Island and Pichilique Bay, Baja California, to the Pacific coast of Costa Rica. There are no published records of occurrences between these two points.

Pinnotheres reticulatus Rathbun

Figs. 1, 2

Pinnotheres reticulatus Rathbun, 1918:93-94, pl. 21, fig. 1 & 2.—Glassell, 1934: 301, list.—Schmitt, McCain, and Davidson, 1973:83, list.

Pinnotheres jamesi Rathbun, 1923:625-626, pl. 9, fig. 1 & 2; text figs. 1 & 2.—Glassell, 1934:301, list.—Silas and Alagarwami, 1967:1200-1223, catalogue.—Schmitt, McCain and Davidson, 1973:50, list.

Type-locality. —Gulf of California: off San Josef Island, Lower (Baja) California, Mexico.

Recorded range. —San Josef Island and Pichilique Bay, Baja California.

Material examined. —Pacific coast, Costa Rica (no further data) from host bivalve *Polymesoda inflata* Keene, 1971, A. Castaing, 2 females, 1 male. Holotype female of *P. reticulatus*, USNM 18217, San Josef Island, Baja California (25°02'15"N, 110°43'30"W), 17 fathoms. Holotype male of *P. jamesi*, USNM 57005, Pichilique Bay, Baja California, by electric light.

Remarks. —In the description of *P. jamesi*, Rathbun mentioned similarity of the third maxillipeds to those of *P. reticulatus*, but dismissed any other similarities and the possibility of their being the same species. I have compared the Paris

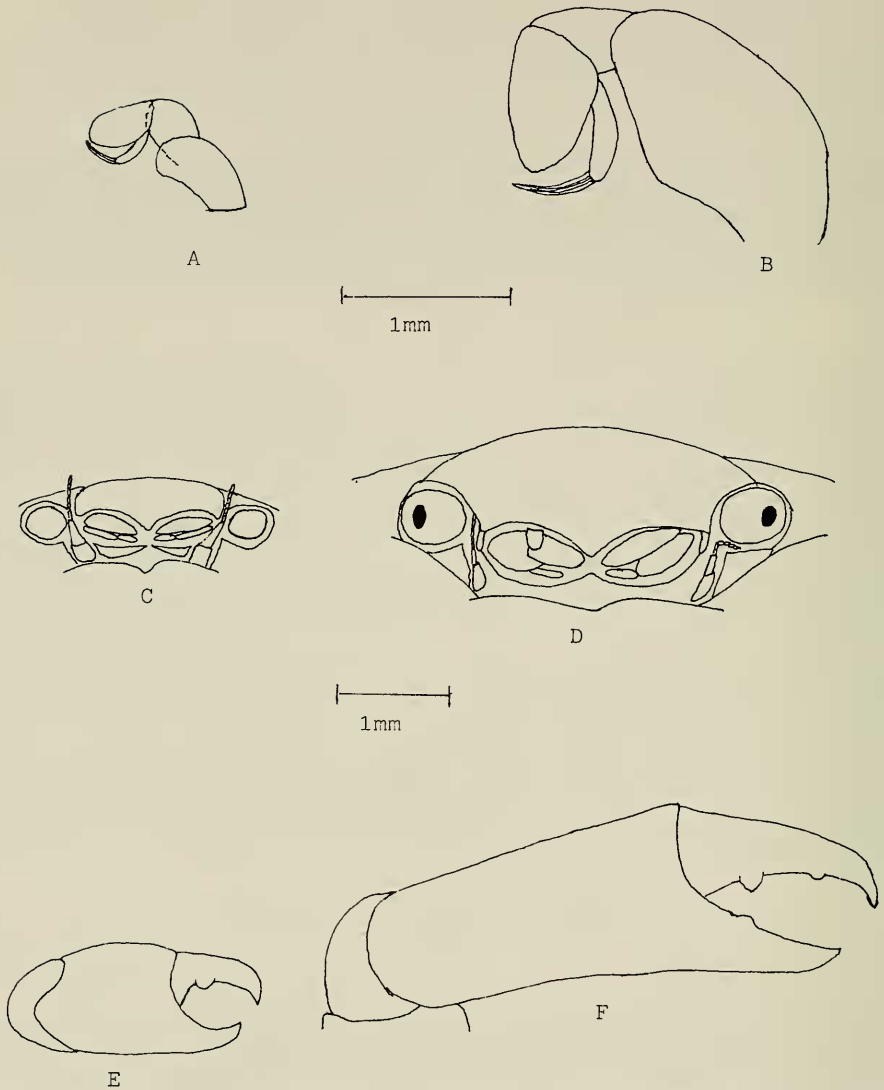


Fig. 1. *Pinnotheres reticulatus*. A, 3rd maxilliped male; B, 3rd maxilliped female; C, Front, male; D, Front, female; E, Right chela, male; F, Right chela, female.

Museum specimens with the type-specimens of those species. Similarities in the third maxillipeds among these specimens are based partly on published drawings of those structures, as they are missing from the *P. reticulatus* holotype (Rathbun, 1918, 1923). Additional drawings of the third maxillipeds are provided here. The dactyl, propodus, and carpus are identical in the specimens compared. There is a tuft of fused or densely packed, sickle-shaped, setae on the tip of the dactyl that extends well past the tip of the propodus. This feature is not seen in Rathbun's illustrations, but is present on the specimens I compared (Fig. 1A, B).

The general shape of the two sexes is similar (Fig. 2A, B, C, D). The front,

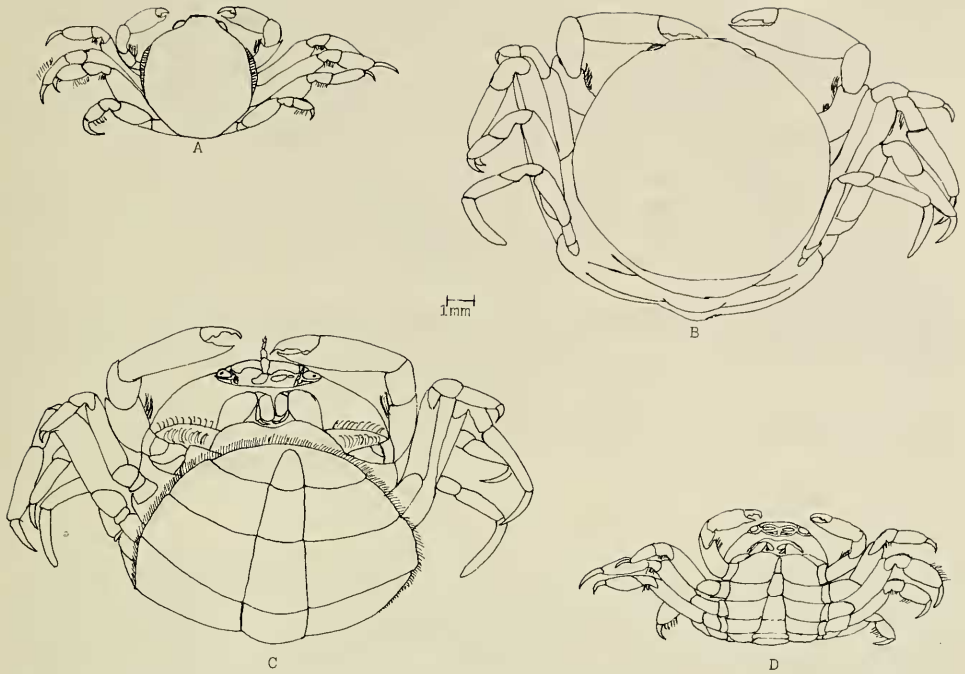


Fig. 2. *Pinnotheres reticulatus*. A, Male, dorsal view; B, Female, dorsal view; C, Female, ventral view; D, Male, ventral view.

abbreviated in the female and pronounced in the male, is similar in both (Fig. 1C, D). Leg shapes and length ratios are similar, relative lengths from first to last in the male being 2:3:1:4 and 2:4:3:1 in the female. The only major difference is that the fourth walking leg of the female is longest due to difference in the dactyl length and shape. Shapes of the limbs are similar, the male's being more stout and the female's more elongate. The chelae are sexually dimorphic (Fig. 1E, F), but between sexes are similar to each other in the carpal and meral segments (Fig. 2). The reticulated pattern of the chelae is not evident in the Paris Museum specimens, but is in the holotype female. There is no reticulated pattern on the chelae of male *P. reticulatus*.

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